

CLAIMS

1. Apparatus for treating a subject, comprising:
 - an elongated generally rigid support element having a length of at least 1.8 cm, and having a distal end;
 - 5 one or more electrodes fixed to the support element in a vicinity of the distal end thereof, and configured to be positioned in a vicinity of a site of the subject when the support element is inserted into a body of the subject, such that a portion of the support element remains outside of the
 - 10 body, the site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of
 - 15 the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve
 - 20 of the subject, and a lesser deep petrosal nerve of the subject; and
 - a control unit, coupled to the support element, and adapted to drive the electrodes to apply an electrical current to the site, and to configure the current to
 - 25 increase cerebral blood flow (CBF) of the subject, so as to treat a condition of the subject.
2. The apparatus according to claim 1, wherein the condition includes an acute ischemic condition of a brain of the subject, and wherein the control unit is adapted to
- 30 configure the current to increase the CBF to a level

sufficient to treat the acute ischemic condition of the brain.

3. The apparatus according to claim 1, wherein the condition includes a complication of subarachnoid hemorrhage (SAH) of the subject, and wherein the control unit is adapted to configure the current to increase the CBF to a level sufficient to treat the complication.

4. The apparatus according to claim 1, wherein the condition includes an acute brain injury of the subject, and wherein the control unit is adapted to configure the current to increase the CBF to a level sufficient to treat the acute brain injury.

5. The apparatus according to claim 1, wherein the condition includes vasospasm after stroke of the subject, and wherein the control unit is adapted to configure the current to increase the CBF to a level sufficient to treat the vasospasm after stroke.

6. The apparatus according to claim 1, wherein the condition includes traumatic brain injury (TBI) of the subject, and wherein the control unit is adapted to configure the current to increase the CBF to a level sufficient to treat the TBI.

7. The apparatus according to claim 1, wherein the condition includes a seizure of the subject, and wherein the control unit is adapted to configure the current to increase the CBF to a level sufficient to treat the seizure.

8. The apparatus according to claim 1, wherein the site includes the SPG of the subject, and wherein the electrodes are configured to be positioned in the vicinity of the SPG.

9. The apparatus according to claim 1, wherein the support element is substantially straight.

10. The apparatus according to claim 1, wherein the support element has a length between about 7 cm and about 13 cm.
11. The apparatus according to claim 1, wherein a portion of the support element adapted for insertion into the body
5 has a length of between about 2.5 cm and about 3 cm.
12. The apparatus according to claim 1, wherein the control unit is adapted to configure the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse
10 width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.
13. The apparatus according to claim 1, wherein the
15 condition includes occlusion within a retinal circulation of the subject, and wherein the control unit is adapted to configure the current to increase retinal blood flow of the subject to a level sufficient to treat the occlusion within the retinal circulation.
- 20 14. The apparatus according to claim 13, wherein the occlusion includes retinal artery occlusion (RAO) of the subject, and wherein the control unit is adapted to configure the current to increase the retinal blood flow to a level sufficient to treat the RAO.
- 25 15. The apparatus according to claim 13, wherein the occlusion includes retinal venous occlusion (RVO) of the subject, and wherein the control unit is adapted to configure the current to increase the retinal blood flow to a level sufficient to treat the RVO.
- 30 16. The apparatus according to claim 1, wherein the support element is adapted to be positioned in the vicinity of the

site by insertion through a roof of an oral cavity of the subject.

17. The apparatus according to claim 16, wherein the support element is adapted to be positioned in the vicinity
5 of the site by insertion through a greater palatine canal of the subject.

18. The apparatus according to claim 1, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a nose of the subject.

10 19. The apparatus according to claim 18, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a sphenopalatine foramen of the subject.

20. The apparatus according to claim 1, wherein the support
15 element comprises at least one mark, adapted to indicate a depth of insertion of the support element in the body.

21. The apparatus according to claim 20, wherein a distance of the mark from the distal end of the support element is between about 2.5 cm and about 3 cm.

20 22. The apparatus according to claim 1, wherein the support element comprises a stopper, adapted to prevent insertion of the support element into the body beyond a certain depth.

23. The apparatus according to claim 22, wherein a distance of the stopper from the distal end of the support element is
25 between about 2.5 cm and about 3 cm.

24. The apparatus according to claim 1, wherein the support element is bent at one or more locations.

25. The apparatus according to claim 24, wherein an angle of a bend of the support element is between about 20 and
30 about 40 degrees.

26. The apparatus according to claim 24, wherein a distance of a bend of the support element from the distal end of the support element is between about 2 cm and about 3 cm.

27. Apparatus for treating a complication of subarachnoid hemorrhage (SAH) of a subject, comprising:

a medical vehicle, adapted to directly treat the SAH;
and

a stimulator adapted to stimulate at least one site of the subject, so as to treat a complication arising from use of the medical vehicle, the site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject.

28. The apparatus according to claim 27, wherein the site includes the SPG of the subject, and wherein the stimulator is adapted to stimulate the SPG.

29. The apparatus according to claim 27, wherein the stimulator is adapted to configure the stimulation to increase cerebral blood flow (CBF) of the subject.

30. The apparatus according to claim 27, wherein the medical vehicle comprises a tool for clipping an aneurysm that caused the SAH.

31. The apparatus according to claim 27, wherein the medical vehicle comprises a pharmaceutical composition for treating an aneurysm that caused the SAH.

32. The apparatus according to claim 27, wherein the
5 stimulator comprises an electrical stimulator, adapted to apply an electrical current to the site.

33. The apparatus according to claim 27, wherein the stimulator comprises a magnetic stimulator, adapted to apply a magnetic field to the site.

10 34. The apparatus according to claim 27, wherein the stimulator comprises a chemical stimulator, adapted to apply a chemical to the site.

35. The apparatus according to claim 27, wherein the
15 stimulator comprises a mechanical stimulator, adapted to apply mechanical energy to the site.

36. Apparatus for treating a condition of a subject, comprising:

a coil, adapted to be positioned in a vicinity of a site selected from the list consisting of: a sphenopalatine
20 ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the
25 otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject; and

30 a control unit, adapted to drive the coil to generate a magnetic field in the vicinity of the site capable of

inducing an increase in cerebral blood flow (CBF) of the subject.

37. The apparatus according to claim 36, wherein the site includes the SPG of the subject, and wherein the coil is
5 adapted to be positioned in the vicinity of the SPG.

38. The apparatus according to claim 36, wherein the control unit is adapted to generate the magnetic field with a strength sufficient to stimulate the site, and insufficient to substantially stimulate brain tissue of the
10 subject.

39. The apparatus according to claim 36, comprising a cooling element, adapted to prevent excessive heating of the coil.

40. The apparatus according to claim 36, wherein the coil
15 comprises between about 4 and about 30 loops of wire.

41. The apparatus according to claim 36, wherein the coil is adapted to be inserted into a nasal cavity of the subject.

42. The apparatus according to claim 41, wherein the coil
20 is substantially figure-eight-shaped.

43. The apparatus according to claim 41, wherein the coil is substantially 4-leaf-shaped.

44. The apparatus according to claim 41, wherein the coil is substantially circular.

25 45. The apparatus according to claim 41, wherein the coil has a diameter of between about 3 mm and about 12 mm.

46. The apparatus according to claim 36, wherein the coil is adapted to be placed in a vicinity of a temporomandibular joint of the subject.

47. The apparatus according to claim 46, wherein the coil has a diameter of between about 3 cm and about 12 cm.

48. The apparatus according to claim 36, wherein the coil is adapted to be placed around at least a portion of a head
5 of the subject.

49. The apparatus according to claim 48, wherein the coil has a diameter of between about 3 cm and about 12 cm.

50. Apparatus for treating a condition of a subject, comprising:

10 a coil, adapted to be positioned in a vicinity of a site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch
15 between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater
20 superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject; and

a control unit, adapted to drive the coil to generate a magnetic field in the vicinity of the site capable of inducing an increase in permeability of a blood-brain
25 barrier (BBB) of the subject.

51. The apparatus according to claim 50, wherein the site includes the SPG of the subject, and wherein the coil is adapted to be positioned in the vicinity of the SPG.

52. The apparatus according to claim 50, wherein the
30 control unit is adapted to generate the magnetic field with a strength sufficient to stimulate the site, and

insufficient to substantially stimulate brain tissue of the subject.

53. The apparatus according to claim 50, comprising a cooling element, adapted to prevent excessive heating of the
5 coil.

54. The apparatus according to claim 50, wherein the coil comprises between about 4 and about 30 loops of wire.

55. The apparatus according to claim 50, wherein the coil is adapted to be inserted into a nasal cavity of the
10 subject.

56. The apparatus according to claim 55, wherein the coil is substantially figure-eight-shaped.

57. The apparatus according to claim 55, wherein the coil is substantially 4-leaf-shaped.

15 58. The apparatus according to claim 55, wherein the coil is substantially circular.

59. The apparatus according to claim 55, wherein the coil has a diameter of between about 3 mm and about 12 mm.

60. The apparatus according to claim 50, wherein the coil
20 is adapted to be placed in a vicinity of a temporomandibular joint of the subject.

61. The apparatus according to claim 60, wherein the coil has a diameter of between about 30 mm and about 120 mm.

62. The apparatus according to claim 50, wherein the coil
25 is adapted to be placed around at least a portion of a head of the subject.

63. The apparatus according to claim 62, wherein the coil has a diameter of between about 10 cm and about 25 cm.

64. Apparatus for facilitating a diagnosis of a condition of a subject, comprising:

an elongated generally rigid support element having a length of at least 1.8 cm, and having a distal end;

5 one or more electrodes fixed to the support element in a vicinity of the distal end thereof, and configured to be positioned in a vicinity of a site of the subject when the support element is inserted into a body of the subject, such that a portion of the support element remains outside of the
10 body, the site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of
15 the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve
20 of the subject, and a lesser deep petrosal nerve of the subject; and

a control unit, coupled to the support element, and adapted to:

drive the electrodes to apply an electrical current to
25 the site, and

configure the current to induce an increase in permeability of a blood-brain barrier (BBB) of the subject sufficient to increase passage of a diagnostic agent across the BBB into a central nervous system (CNS) of the subject.

30 65. The apparatus according to claim 64, wherein the site includes the SPG of the subject, and wherein the electrodes are configured to be positioned in the vicinity of the SPG.

66. The apparatus according to claim 64, wherein the support element is substantially straight.

67. The apparatus according to claim 64, wherein the support element has a length between about 7 cm and about 13
5 cm.

68. The apparatus according to claim 64, wherein a portion of the support element adapted for insertion into the body has a length of between about 2.5 cm and about 3 cm.

69. The apparatus according to claim 64, wherein the
10 control unit is adapted to configure the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between
15 about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

70. The apparatus according to claim 64, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a roof of an oral cavity of
20 the subject.

71. The apparatus according to claim 70, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a greater palatine canal of the subject.

25 72. The apparatus according to claim 64, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a nose of the subject.

73. The apparatus according to claim 72, wherein the support element is adapted to be positioned in the vicinity
30 of the site by insertion through a sphenopalatine foramen of the subject.

74. The apparatus according to claim 64, wherein the support element comprises at least one mark, adapted to indicate a depth of insertion of the support element in the body.

5 75. The apparatus according to claim 74, wherein a distance of the mark from the distal end of the support element is between about 2.5 cm and about 3 cm.

76. The apparatus according to claim 64, wherein the support element comprises a stopper, adapted to prevent
10 insertion of the support element into the body beyond a certain depth.

77. The apparatus according to claim 76, wherein a distance of the stopper from the distal end of the support element is between about 2.5 cm and about 3 cm.

15 78. The apparatus according to claim 64, wherein the support element is bent at one or more locations.

79. The apparatus according to claim 78, wherein an angle of a bend of the support element is between about 20 and about 40 degrees.

20 80. The apparatus according to claim 78, wherein a distance of a bend of the support element from the distal end of the support element is between about 2 cm and about 3 cm.

81. Apparatus for facilitating delivery of a drug to a subject, comprising:

25 an elongated generally rigid support element having a length of at least 1.8 cm, and having a distal end;

one or more electrodes fixed to the support element in a vicinity of the distal end thereof, and configured to be positioned in a vicinity of a site of the subject when the
30 support element is inserted into a body of the subject, such

that a portion of the support element remains outside of the body, the site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject; and

a control unit, coupled to the support element, and adapted to:

drive the electrodes to apply an electrical current to the site, and

configure the current to induce an increase in permeability of a blood-brain barrier (BBB) of the subject sufficient to increase passage of the drug across the BBB into a central nervous system (CNS) of the subject.

82. The apparatus according to claim 81, wherein the site includes the SPG of the subject, and wherein the electrodes are configured to be positioned in the vicinity of the SPG.

83. The apparatus according to claim 81, wherein the support element is substantially straight.

84. The apparatus according to claim 81, wherein the support element has a length between about 7 cm and about 13 cm.

85. The apparatus according to claim 81, wherein a portion of the support element adapted for insertion into the body has a length of between about 2.5 cm and about 3 cm.

86. The apparatus according to claim 81, wherein the
5 control unit is adapted to configure the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between
10 about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

87. The apparatus according to claim 81, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a roof of an oral cavity of
15 the subject.

88. The apparatus according to claim 87, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a greater palatine canal of the subject.

20 89. The apparatus according to claim 81, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a nose of the subject.

90. The apparatus according to claim 89, wherein the support element is adapted to be positioned in the vicinity
25 of the site by insertion through a sphenopalatine foramen of the subject.

91. The apparatus according to claim 81, wherein the support element comprises at least one mark, adapted to indicate a depth of insertion of the support element in the
30 body.

92. The apparatus according to claim 91, wherein a distance of the mark from the distal end of the support element is between about 2.5 cm and about 3 cm.

93. The apparatus according to claim 81, wherein the support element comprises a stopper, adapted to prevent insertion of the support element into the body beyond a certain depth.

94. The apparatus according to claim 93, wherein a distance of the stopper from the distal end of the support element is between about 2.5 cm and about 3 cm.

95. The apparatus according to claim 81, wherein the support element is bent at one or more locations.

96. The apparatus according to claim 95, wherein an angle of a bend of the support element is between about 20 and about 40 degrees.

97. The apparatus according to claim 95, wherein a distance of a bend of the support element from the distal end of the support element is between about 2 cm and about 3 cm.

98. Apparatus for facilitating a diagnosis of a condition of a subject, comprising:

an elongated generally rigid support element having a length of at least 1.8 cm, and having a distal end;

one or more electrodes fixed to the support element in a vicinity of the distal end thereof, and configured to be positioned in a vicinity of a site of the subject when the support element is inserted into a body of the subject, such that a portion of the support element remains outside of the body, the site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a

communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject; and

a control unit, coupled to the support element, and adapted to:

drive the electrodes to apply an electrical current to the site, and

configure the current to induce an increase in permeability of a blood-brain barrier (BBB) of the subject sufficient to increase passage of a constituent of a central nervous system (CNS) of the subject across the BBB into a systemic blood circulation of the subject.

99. The apparatus according to claim 98, wherein the site includes the SPG of the subject, and wherein the electrodes are configured to be positioned in the vicinity of the SPG.

100. The apparatus according to claim 98, wherein the support element is substantially straight.

101. The apparatus according to claim 98, wherein the support element has a length between about 7 cm and about 13 cm.

102. The apparatus according to claim 98, wherein a portion of the support element adapted for insertion into the body has a length of between about 2.5 cm and about 3 cm.

103. The apparatus according to claim 98, wherein the control unit is adapted to configure the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an

amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of
5 between about 1 second and about 2 minutes.

104. The apparatus according to claim 98, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a roof of an oral cavity of the subject.

10 105. The apparatus according to claim 104, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a greater palatine canal of the subject.

106. The apparatus according to claim 98, wherein the
15 support element is adapted to be positioned in the vicinity of the site by insertion through a nose of the subject.

107. The apparatus according to claim 106, wherein the support element is adapted to be positioned in the vicinity of the site by insertion through a sphenopalatine foramen of
20 the subject.

108. The apparatus according to claim 98, wherein the support element comprises at least one mark, adapted to indicate a depth of insertion of the support element in the body.

25 109. The apparatus according to claim 108, wherein a distance of the mark from the distal end of the support element is between about 2.5 cm and about 3 cm.

110. The apparatus according to claim 98, wherein the support element comprises a stopper, adapted to prevent
30 insertion of the support element into the body beyond a certain depth.

111. The apparatus according to claim 110, wherein a distance of the stopper from the distal end of the support element is between about 2.5 cm and about 3 cm.

112. The apparatus according to claim 98, wherein the
5 support element is bent at one or more locations.

113. The apparatus according to claim 112, wherein an angle of a bend of the support element is between about 20 and about 40 degrees.

114. The apparatus according to claim 112, wherein a
10 distance of a bend of the support element from the distal end of the support element is between about 2 cm and about 3 cm.

115. Apparatus for facilitating a diagnosis of a condition of a subject, comprising:

15 a coil, adapted to be positioned in a vicinity of a site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch
20 between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater
25 superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject; and

a control unit, adapted to drive the coil to generate a magnetic field in the vicinity of the site capable of inducing an increase in permeability of a blood-brain
30 barrier (BBB) of the subject sufficient to increase passage

of a diagnostic agent across the BBB into a central nervous system (CNS) of the subject.

116. The apparatus according to claim 115, wherein the site includes the SPG of the subject, and wherein the coil is
5 adapted to be positioned in the vicinity of the SPG.

117. The apparatus according to claim 115, wherein the control unit is adapted to generate the magnetic field with a strength sufficient to stimulate the site, and insufficient to substantially stimulate brain tissue of the
10 subject.

118. The apparatus according to claim 115, comprising a cooling element, adapted to prevent excessive heating of the coil.

119. The apparatus according to claim 115, wherein the coil
15 comprises between about 4 and about 30 loops of wire.

120. The apparatus according to claim 115, wherein the coil is adapted to be inserted into a nasal cavity of the subject.

121. The apparatus according to claim 120, wherein the coil
20 is substantially figure-eight-shaped.

122. The apparatus according to claim 120, wherein the coil is substantially 4-leaf-shaped.

123. The apparatus according to claim 120, wherein the coil is substantially circular.

25 124. The apparatus according to claim 120, wherein the coil has a diameter of between about 3 mm and about 12 mm.

125. The apparatus according to claim 115, wherein the coil is adapted to be placed in a vicinity of a temporomandibular joint of the subject.

126. The apparatus according to claim 125, wherein the coil has a diameter of between about 3 cm and about 12 cm.

127. The apparatus according to claim 115, wherein the coil is adapted to be placed around at least a portion of a head
5 of the subject.

128. The apparatus according to claim 127, wherein the coil has a diameter of between about 3 cm and about 12 cm.

129. Apparatus for facilitating delivery of a drug to a subject, comprising:

10 a coil, adapted to be positioned in a vicinity of a site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch
15 between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater
20 superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject; and

a control unit, adapted to drive the coil to generate a magnetic field in the vicinity of the site capable of inducing an increase in permeability of a blood-brain
25 barrier (BBB) of the subject sufficient to increase passage of the drug across the BBB into a central nervous system (CNS) of the subject.

130. The apparatus according to claim 129, wherein the site includes the SPG of the subject, and wherein the coil is
30 adapted to be positioned in the vicinity of the SPG.

131. The apparatus according to claim 129, wherein the control unit is adapted to generate the magnetic field with a strength sufficient to stimulate the site, and insufficient to substantially stimulate brain tissue of the
5 subject.

132. The apparatus according to claim 129, comprising a cooling element, adapted to prevent excessive heating of the coil.

133. The apparatus according to claim 129, wherein the coil
10 comprises between about 4 and about 30 loops of wire.

134. The apparatus according to claim 129, wherein the coil is adapted to be inserted into a nasal cavity of the subject.

135. The apparatus according to claim 134, wherein the coil
15 is substantially figure-eight-shaped.

136. The apparatus according to claim 134, wherein the coil is substantially 4-leaf-shaped.

137. The apparatus according to claim 134, wherein the coil is substantially circular.

20 138. The apparatus according to claim 134, wherein the coil has a diameter of between about 3 mm and about 12 mm.

139. The apparatus according to claim 129, wherein the coil is adapted to be placed in a vicinity of a temporomandibular joint of the subject.

25 140. The apparatus according to claim 139, wherein the coil has a diameter of between about 3 cm and about 12 cm.

141. The apparatus according to claim 129, wherein the coil is adapted to be placed around at least a portion of a head of the subject.

142. The apparatus according to claim 141, wherein the coil has a diameter of between about 3 cm and about 12 cm.

143. Apparatus for facilitating a diagnosis of a condition of a subject, comprising:

5 a coil, adapted to be positioned in a vicinity of a site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch
10 between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater
15 superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject; and

 a control unit, adapted to drive the coil to generate a magnetic field in the vicinity of the site capable of inducing an increase in permeability of a blood-brain
20 barrier (BBB) of the subject sufficient to increase passage of a constituent of a central nervous system (CNS) of the subject across the BBB into a systemic blood circulation of the subject.

144. The apparatus according to claim 143, wherein the site
25 includes the SPG of the subject, and wherein the coil is adapted to be positioned in the vicinity of the SPG.

145. The apparatus according to claim 143, wherein the control unit is adapted to generate the magnetic field with a strength sufficient to stimulate the site, and
30 insufficient to substantially stimulate brain tissue of the subject.

146. The apparatus according to claim 143, comprising a cooling element, adapted to prevent excessive heating of the coil.

147. The apparatus according to claim 143, wherein the coil
5 comprises between about 4 and about 30 loops of wire.

148. The apparatus according to claim 143, wherein the coil is adapted to be inserted into a nasal cavity of the subject.

149. The apparatus according to claim 148, wherein the coil
10 is substantially figure-eight-shaped.

150. The apparatus according to claim 148, wherein the coil is substantially 4-leaf-shaped.

151. The apparatus according to claim 148, wherein the coil is substantially circular.

152. The apparatus according to claim 151, wherein the coil
15 has a diameter of between about 3 mm and about 12 mm.

153. The apparatus according to claim 143, wherein the coil is adapted to be placed in a vicinity of a temporomandibular joint of the subject.

154. The apparatus according to claim 153, wherein the coil
20 has a diameter of between about 3 cm and about 12 cm.

155. The apparatus according to claim 143, wherein the coil is adapted to be placed around at least a portion of a head of the subject.

156. The apparatus according to claim 155, wherein the coil
25 has a diameter of between about 3 cm and about 12 cm.

157. Apparatus for application to a subject, comprising:

an elongated support element having a length of between about 1.8 cm and about 4 cm, and having a proximal end and a distal end;

one or more electrodes fixed to the support element in
5 a vicinity of the distal end thereof; and

a control unit, coupled to the support element in a vicinity of the proximal end thereof, and comprising a battery, the control unit adapted to:

drive the electrodes to apply an electrical current to
10 tissue of the subject, and

configure the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in
15 alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

158. The apparatus according to claim 157, wherein the tissue is selected from the list consisting of: a
20 sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent
25 fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the
30 subject, and wherein the control unit is adapted to drive the electrodes to apply the current to the selected tissue.

159. The apparatus according to claim 157, comprising an oral appliance, coupled to the support element, and shaped so as to define a surface that fits closely to a roof of an oral cavity.

5 160. The apparatus according to claim 157, wherein the support element has a length of between about 1.8 cm and about 3 cm.

161. The apparatus according to claim 157, wherein the control unit has a volume, including the battery, of less
10 than about 3 cm³.

162. The apparatus according to claim 157, wherein the control unit is adapted to apply the current having on periods of between about 60 seconds and about 105 seconds, and off periods of between about 30 seconds and 90 seconds.

15 163. The apparatus according to claim 162, wherein the control unit is adapted to apply the current having on periods of about 90 seconds, and off periods of about 60 seconds.

164. Apparatus for application to a subject, comprising:
20 an elongated support element having a length of between about 1.8 cm and about 4 cm, and having a proximal end and a distal end;

one or more electrodes fixed to the support element in a vicinity of the distal end thereof;

25 a receiver, fixed to the support element in a vicinity of the proximal end thereof; and

a control unit, adapted to be coupled to the receiver, and adapted to:

drive the electrodes to apply an electrical current to
30 tissue of the subject, and

configure the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

165. The apparatus according to claim 164, wherein the tissue is selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject, and wherein the control unit is adapted to drive the electrodes to apply the current to the selected tissue.

166. The apparatus according to claim 164, wherein the support element has a length of between about 1.8 cm and about 3 cm.

167. The apparatus according to claim 164, wherein the receiver comprises an electrical contact site, and wherein the control unit is adapted to be coupled to the receiver by being brought into physical contact with the electrical contact site.

168. The apparatus according to claim 164, wherein the receiver comprises a transducer, and wherein the control

unit comprises a wireless transmitter, which is adapted to couple the control unit to the receiver via wireless electromagnetic communication with the transducer.

169. The apparatus according to claim 168, wherein the
5 transducer comprises a coil.

170. The apparatus according to claim 168, wherein the control unit is adapted to be positioned outside of a head of the subject during operation.

171. The apparatus according to claim 164, wherein the
10 control unit is adapted to be positioned inside an oral cavity of the subject.

172. The apparatus according to claim 171, comprising an oral appliance, adapted to be fixed to the control unit, and shaped so as to define a surface that fits closely to a roof
15 of the oral cavity.

173. The apparatus according to claim 164, wherein the receiver has a volume of less than about 0.8 cm^3 .

174. The apparatus according to claim 173, wherein the receiver has a volume of less than about 0.15 cm^3 .

20 175. The apparatus according to claim 164, wherein the control unit is adapted to apply the current having on periods of between about 60 seconds and about 105 seconds, and off periods of between about 30 seconds and 90 seconds.

176. The apparatus according to claim 175, wherein the
25 control unit is adapted to apply the current having on periods of about 90 seconds, and off periods of about 60 seconds.

177. Apparatus for application to a subject, comprising:
an ENT endoscope, having at least one working channel;

at least one electrode, adapted to be passed through the working channel, and positioned in a vicinity of tissue of the subject; and

5 a control unit, coupled to the electrode, and adapted to drive the electrode to apply a non-ablating electrical signal to the tissue.

178. The apparatus according to claim 177, wherein the control unit is adapted to configure the signal to have a pulse frequency of between about 10 Hz and about 50 Hz, an
10 amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

15 179. The apparatus according to claim 177, wherein the tissue is selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a
20 communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian
25 nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject, and wherein the control unit is adapted to drive the electrode to apply the signal to the selected tissue.

180. The apparatus according to claim 177, wherein the ENT
30 endoscope comprises a side-viewing scope having a viewing angle of between about 30 and about 120 degrees relative to a longitudinal axis of the endoscope.

181. The apparatus according to claim 180, wherein the electrode is adapted to be positioned so as to be viewable by the side-viewing scope.

182. Apparatus for modifying a property of a brain of a subject, comprising:

at least one electrode, adapted to be positioned in a vicinity of a mucous membrane of a palate of an oral cavity of the subject; and

a control unit, adapted to drive the electrode to apply an electrical current to the mucous membrane, and to configure the current to be capable of inducing an increase in permeability of a blood-brain barrier (BBB) of the subject.

183. The apparatus according to claim 182, wherein the control unit is adapted to configure the current to have a magnitude sufficient to activate a sphenopalatine ganglion (SPG) of the subject via nerve fibers in physical contact with the mucous membrane.

184. The apparatus according to claim 182, wherein the control unit is adapted to configure the current to increase the permeability of the BBB to a magnitude sufficient to treat a condition of the subject.

185. The apparatus according to claim 182, wherein the control unit is adapted to configure the current to increase the permeability of the BBB to a magnitude sufficient to perform a diagnosis of a condition of the subject.

186. Apparatus for modifying a property of a brain of a subject, comprising:

at least one electrode, adapted to be positioned in a vicinity of a mucous membrane of a palate of an oral cavity of the subject; and

a control unit, adapted to drive the electrode to apply an electrical current to the mucous membrane, and to configure the current to be capable of inducing an increase in cerebral blood flow (CBF) of the subject.

- 5 187. The apparatus according to claim 186, wherein the control unit is adapted to configure the current to have a magnitude sufficient to activate a sphenopalatine ganglion (SPG) of the subject via nerve fibers in physical contact with the mucous membrane.
- 10 188. The apparatus according to claim 186, wherein the control unit is adapted to configure the current to increase the CBF to a magnitude sufficient to treat a condition of the subject.

189. A method for treating a subject, comprising:

- 15 positioning at least one electrode at at least one site of the subject for less than about 3 hours, the site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a
- 20 sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of
- 25 the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject;

applying an electrical current to the site of the subject; and

configuring the current to increase cerebral blood flow (CBF) of the subject, so as to treat a condition of the subject.

190. The method according to claim 189, wherein the
5 condition includes an acute ischemic condition of a brain of the subject, and wherein configuring the current comprises configuring the current to increase the CBF to a level sufficient to treat the acute ischemic condition of the brain.
- 10 191. The method according to claim 189, wherein the condition includes a complication of subarachnoid hemorrhage (SAH) of the subject, and wherein configuring the current comprises configuring the current to increase the CBF to a level sufficient to treat the complication.
- 15 192. The method according to claim 189, wherein the condition includes an acute brain injury of the subject, and wherein configuring the current comprises configuring the current to increase the CBF to a level sufficient to treat the acute brain injury.
- 20 193. The method according to claim 189, wherein the condition includes vasospasm after stroke of the subject, and wherein configuring the current comprises configuring the current to increase the CBF to a level sufficient to treat the vasospasm after stroke.
- 25 194. The method according to claim 189, wherein the condition includes traumatic brain injury (TBI) of the subject, and wherein configuring the current comprises configuring the current to increase the CBF to a level sufficient to treat the TBI.
- 30 195. The method according to claim 189, wherein the condition includes a seizure of the subject, and wherein

configuring the current comprises configuring the current to increase the CBF to a level sufficient to treat the seizure.

196. The method according to claim 189, wherein the site includes the SPG of the subject, and wherein positioning the
5 at least one electrode comprises positioning the at least one electrode at the SPG.

197. The method according to claim 189, wherein positioning the at least one electrode comprises inserting the at least one electrode between about 2.5 cm and about 3 cm into a
10 body of the subject.

198. The method according to claim 189, wherein configuring the current comprises configuring the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse
15 width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

199. The method according to claim 189, wherein the
20 condition includes occlusion within a retinal circulation of the subject, and wherein configuring the current comprises configuring the current to increase retinal blood flow of the subject to a level sufficient to treat the occlusion within the retinal circulation.

200. The method according to claim 199, wherein the
25 occlusion includes retinal artery occlusion (RAO) of the subject, and wherein configuring the current comprises configuring the current to increase the retinal blood flow to a level sufficient to treat the RAO.

201. The method according to claim 199, wherein the
30 occlusion includes retinal venous occlusion (RVO) of the

subject, and wherein configuring the current comprises configuring the current to increase the retinal blood flow to a level sufficient to treat the RVO.

202. The method according to claim 189, wherein positioning
5 the at least one electrode comprises inserting the at least one electrode through a roof of an oral cavity of the subject.

203. The method according to claim 202, wherein inserting
10 the at least one electrode through the roof of the oral cavity comprises inserting the at least one electrode through a greater palatine canal of the subject.

204. The method according to claim 189, wherein positioning the at least one electrode comprises inserting the at least one electrode through a nose of the subject.

15 205. The method according to claim 204, wherein inserting the at least one electrode through the nose comprises inserting the at least one electrode through a sphenopalatine foramen of the subject.

206. The method according to claim 189, wherein positioning
20 the at least one electrode comprises determining a depth of insertion of the at least one electrode in a body of the subject with reference to at least one mark on the at least one electrode.

207. The method according to claim 189, wherein positioning
25 the electrode comprises:

applying the electrical current to the site;
observing one or more physiological responses of the subject to the current; and
verifying desired placement of the electrode responsive
30 to the observation.

208. A method for treating a complication of subarachnoid hemorrhage (SAH) of a subject, comprising stimulating at least one site of the subject in conjunction with treating the SAH, the site selected from the list consisting of: a
5 sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent
10 fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the
15 subject.

209. The method according to claim 208, wherein the site includes the SPG of the subject, and wherein stimulating the site comprises stimulating the SPG.

210. The method according to claim 208, wherein stimulating
20 the site comprises configuring the stimulation to increase cerebral blood flow (CBF) of the subject.

211. The method according to claim 208, wherein treating the SAH includes clipping an aneurysm that caused the SAH, and wherein stimulating the site comprises stimulating the site
25 in conjunction with clipping the aneurysm.

212. The method according to claim 208, wherein treating the SAH includes administering a pharmaceutical composition for treating an aneurysm that caused the SAH, and wherein stimulating the site comprises stimulating the site in
30 conjunction with administering the pharmaceutical composition.

213. The method according to claim 208, wherein stimulating the site comprises applying an electrical current to the site.

214. The method according to claim 208, wherein stimulating
5 the site comprises applying a magnetic field to the site.

215. The method according to claim 208, wherein stimulating the site comprises applying a chemical to the site.

216. The method according to claim 208, wherein stimulating the site comprises applying mechanical energy to the site.

10 217. The method according to claim 208, wherein stimulating the site comprises stimulating the site prior to treating the SAH.

218. The method according to claim 208, wherein stimulating the site comprises stimulating the site while treating the
15 SAH.

219. The method according to claim 208, wherein stimulating the site comprises stimulating the site after treating the SAH.

220. A method for treating a condition of a subject,
20 comprising:

selecting a site from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a
25 communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian
30 nerve of the subject, a greater superficial petrosal nerve

of the subject, and a lesser deep petrosal nerve of the subject; and

generating a magnetic field in the vicinity of the site capable of inducing an increase in cerebral blood flow of
5 the subject, so as to treat the condition.

221. The method according to claim 220, wherein the site includes the SPG of the subject, and wherein generating the magnetic field comprises generating the magnetic field in the vicinity of the SPG.

10 222. The method according to claim 220, wherein generating the magnetic field comprises generating the magnetic field with a strength sufficient to stimulate the site, and insufficient to substantially stimulate brain tissue of the subject.

15 223. The method according to claim 220, wherein generating the magnetic field comprises cooling the vicinity of the site.

224. The method according to claim 220, wherein generating the magnetic field comprises generating the magnetic field
20 from within a nasal cavity of the subject.

225. The method according to claim 220, wherein generating the magnetic field comprises generating the magnetic field at a vicinity of a temporomandibular joint of the subject.

226. The method according to claim 220, wherein generating
25 the magnetic field comprises generating the magnetic field from around at least a portion of a head of the subject.

227. A method for treating a condition of a subject, comprising:

selecting a site from the list consisting of: a
30 sphenopalatine ganglion (SPG) of the subject, a greater

palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent
5 fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the
10 subject; and

generating a magnetic field in the vicinity of the site capable of inducing an increase in permeability of a blood-brain barrier (BBB) of the subject, so as to treat the condition.

15 228. The method according to claim 227, wherein the site includes the SPG of the subject, and wherein generating the magnetic field comprises generating the magnetic field in the vicinity of the SPG.

229. The method according to claim 227, wherein generating
20 the magnetic field comprises generating the magnetic field with a strength sufficient to stimulate the site, and insufficient to substantially stimulate brain tissue of the subject.

230. The method according to claim 227, wherein generating
25 the magnetic field comprises cooling the vicinity of the site.

231. The method according to claim 227, wherein generating the magnetic field comprises generating the magnetic field from within a nasal cavity of the subject.

232. The method according to claim 227, wherein generating the magnetic field comprises generating the magnetic field at a vicinity of a temporomandibular joint of the subject.

233. The method according to claim 227, wherein generating
5 the magnetic field comprises generating the magnetic field from around at least a portion of a head of the subject.

234. A method for facilitating a diagnosis of a condition of a subject, comprising:

positioning at least one electrode at at least one site
10 of the subject for less than about 3 hours, the site selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch
15 between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater
20 superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject;

applying an electrical current to the site of the subject; and

configuring the current to induce an increase in
25 permeability of a blood-brain barrier (BBB) of the subject sufficient to increase passage of a diagnostic agent across the BBB into a central nervous system (CNS) of the subject.

235. The method according to claim 234, wherein the site includes the SPG of the subject, and wherein positioning the
30 at least one electrode comprises positioning the at least one electrode at the SPG.

236. The method according to claim 234, wherein positioning the at least one electrode comprises inserting the at least one electrode between about 2.5 cm and about 3 cm into a body of the subject.

5 237. The method according to claim 234, wherein configuring the current comprises configuring the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5
10 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

238. The method according to claim 234, wherein positioning the at least one electrode comprises inserting the at least
15 one electrode through a roof of an oral cavity of the subject.

239. The method according to claim 238, wherein inserting the at least one electrode through the roof of the oral cavity comprises inserting the at least one electrode
20 through a greater palatine canal of the subject.

240. The method according to claim 234, wherein positioning the at least one electrode comprises inserting the at least one electrode through a nose of the subject.

241. The method according to claim 240, wherein inserting
25 the at least one electrode through the nose comprises inserting the at least one electrode through a sphenopalatine foramen of the subject.

242. The method according to claim 234, wherein positioning the at least one electrode comprises determining a depth of
30 insertion of the at least one electrode in a body of the

subject with reference to at least one mark on the at least one electrode.

243. The method according to claim 234, wherein positioning the electrode comprises:

- 5 applying the electrical current to the site;
- observing one or more physiological responses of the subject to the current; and
- verifying desired placement of the electrode responsive to the observation.

10 244. A method for facilitating delivery of a drug to a subject, comprising:

- positioning at least one electrode at at least one site of the subject for less than about 3 hours, the site selected from the list consisting of: a sphenopalatine
- 15 ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic
- ganglion of the subject, an afferent fiber going into the
- 20 otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject;
- 25 applying an electrical current to the site of the subject; and
- configuring the current to induce an increase in permeability of a blood-brain barrier (BBB) of the subject sufficient to increase passage of the drug across the BBB
- 30 into a central nervous system (CNS) of the subject.

245. The method according to claim 244, wherein the site includes the SPG of the subject, and wherein positioning the at least one electrode comprises positioning the at least one electrode at the SPG.

5 246. The method according to claim 244, wherein positioning the at least one electrode comprises inserting the at least one electrode between about 2.5 cm and about 3 cm into a body of the subject.

247. The method according to claim 244, wherein configuring
10 the current comprises configuring the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between
15 about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

248. The method according to claim 244, wherein positioning the at least one electrode comprises determining a depth of insertion of the at least one electrode in a body of the
20 subject with reference to at least one mark on the at least one electrode.

249. The method according to claim 244, comprising administering the drug to a body of the subject, in conjunction with applying the current.

25 250. The method according to claim 244, wherein positioning the electrode comprises:

applying the electrical current to the site;
observing one or more physiological responses of the subject to the current; and
30 verifying desired placement of the electrode responsive to the observation.

251. The method according to claim 244, wherein positioning the at least one electrode comprises inserting the at least one electrode through a roof of an oral cavity of the subject.

5 252. The method according to claim 251, wherein inserting the at least one electrode through the roof of the oral cavity comprises inserting the at least one electrode through a greater palatine canal of the subject.

253. The method according to claim 244, wherein positioning
10 the at least one electrode comprises inserting the at least one electrode through a nose of the subject.

254. The method according to claim 253, wherein inserting the at least one electrode through the nose comprises inserting the at least one electrode through a
15 sphenopalatine foramen of the subject.

255. A method for facilitating a diagnosis of a condition of a subject, comprising:

positioning at least one electrode at at least one site of the subject for less than about 3 hours, the site
20 selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic
25 ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep
30 petrosal nerve of the subject; and

applying an electrical current to the site of the subject; and

configuring the current to induce an increase in permeability of a blood-brain barrier (BBB) of the subject
5 sufficient to increase passage of a constituent of a central nervous system (CNS) of the subject across the BBB into a systemic blood circulation of the subject.

256. The method according to claim 255, wherein the site includes the SPG of the subject, and wherein positioning the
10 at least one electrode comprises positioning the at least one electrode at the SPG.

257. The method according to claim 255, wherein positioning the at least one electrode comprises inserting the at least one electrode between about 2.5 cm and about 3 cm into a
15 body of the subject.

258. The method according to claim 255, wherein configuring the current comprises configuring the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse
20 width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

259. The method according to claim 255, wherein positioning
25 the at least one electrode comprises determining a depth of insertion of the at least one electrode in a body of the subject with reference to at least one mark on the at least one electrode.

260. The method according to claim 255, comprising measuring
30 a concentration of the constituent in the systemic blood circulation.

261. The method according to claim 255, wherein positioning the electrode comprises:

- applying the electrical current to the site;
- observing one or more physiological responses of the
- 5 subject to the current; and
- verifying desired placement of the electrode responsive to the observation.

262. The method according to claim 255, wherein positioning the at least one electrode comprises inserting the at least

10 one electrode through a roof of an oral cavity of the subject.

263. The method according to claim 262, wherein inserting the at least one electrode through the roof of the oral cavity comprises inserting the at least one electrode

15 through a greater palatine canal of the subject.

264. The method according to claim 255, wherein positioning the at least one electrode comprises inserting the at least one electrode through a nose of the subject.

265. The method according to claim 264, wherein inserting

20 the at least one electrode through the nose comprises inserting the at least one electrode through a sphenopalatine foramen of the subject.

266. A method for facilitating a diagnosis of a condition of a subject, comprising:

- 25 selecting a site from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of
- 30 the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an

efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the
5 subject; and

generating a magnetic field in the vicinity of the site capable of inducing an increase in permeability of a blood-brain barrier (BBB) of the subject sufficient to increase passage of a diagnostic agent across the BBB into a central
10 nervous system (CNS) of the subject.

267. The method according to claim 266, wherein the site includes the SPG of the subject, and wherein generating the magnetic field comprises generating the magnetic field in the vicinity of the SPG.

15 268. The method according to claim 266, wherein generating the magnetic field comprises generating the magnetic field with a strength sufficient to stimulate the site, and insufficient to substantially stimulate brain tissue of the subject.

20 269. The method according to claim 266, generating the magnetic field comprises cooling the vicinity of the site.

270. The method according to claim 266, wherein generating the magnetic field comprises generating the magnetic field from within a nasal cavity of the subject.

25 271. The method according to claim 266, wherein generating the magnetic field comprises generating the magnetic field at a vicinity of a temporomandibular joint of the subject.

272. The method according to claim 266, wherein generating the magnetic field comprises generating the magnetic field
30 from around at least a portion of a head of the subject.

273. A method for facilitating delivery of a drug to a subject, comprising:

selecting a site from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject; and

generating a magnetic field in the vicinity of the site capable of inducing an increase in permeability of a blood-brain barrier (BBB) of the subject sufficient to increase passage of the drug across the BBB into a central nervous system (CNS) of the subject.

274. The method according to claim 273, wherein the site includes the SPG of the subject, and wherein generating the magnetic field comprises generating the magnetic field in the vicinity of the SPG.

275. The method according to claim 273, wherein generating the magnetic field comprises generating the magnetic field with a strength sufficient to stimulate the site, and insufficient to substantially stimulate brain tissue of the subject.

276. The method according to claim 273, wherein generating the magnetic field comprises cooling the vicinity of the site.

277. The method according to claim 273, wherein generating the magnetic field comprises generating the magnetic field from within a nasal cavity of the subject.

278. The method according to claim 273, wherein generating
5 the magnetic field comprises generating the magnetic field at a vicinity of a temporomandibular joint of the subject.

279. The method according to claim 273, wherein generating the magnetic field comprises generating the magnetic field from around at least a portion of a head of the subject.

10 280. The method according to claim 273, comprising administering the drug to a body of the subject, in conjunction with generating the magnetic field.

281. A method for facilitating a diagnosis of a condition of a subject, comprising:

15 selecting a site from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of
20 the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of the subject, a vidian nerve of the subject, a greater superficial petrosal nerve
25 of the subject, and a lesser deep petrosal nerve of the subject; and

 generating a magnetic field in the vicinity of the site capable of inducing an increase in permeability of a blood-brain barrier (BBB) of the subject sufficient to increase
30 passage of a constituent of a central nervous system (CNS)

of the subject across the BBB into a systemic blood circulation of the subject.

282. The method according to claim 281, wherein the site includes the SPG of the subject, and wherein generating the magnetic field comprises generating the magnetic field in the vicinity of the SPG.

283. The method according to claim 281, wherein generating the magnetic field comprises generating the magnetic field with a strength sufficient to stimulate the site, and insufficient to substantially stimulate brain tissue of the subject.

284. The method according to claim 281, wherein generating the magnetic field comprises cooling the vicinity of the site.

285. The method according to claim 281, wherein generating the magnetic field comprises generating the magnetic field from within a nasal cavity of the subject.

286. The method according to claim 281, wherein generating the magnetic field comprises generating the magnetic field at a vicinity of a temporomandibular joint of the subject.

287. The method according to claim 281, wherein generating the magnetic field comprises generating the magnetic field from around at least a portion of a head of the subject.

288. The method according to claim 281, comprising measuring a concentration of the constituent in the systemic blood circulation.

289. A method comprising:

inserting an elongated support element into a body of a subject, the element having a length of between about 1.8 cm and about 4 cm, and having a distal end;

applying, from the distal end, an electrical current to tissue of the subject; and

configuring the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between
5 about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

10 290. A method comprising:

inserting an elongated support element into a body of a subject, the element having a length of between about 1.8 cm and about 4 cm, and having a distal end;

receiving electromagnetic energy;

15 using the electromagnetic energy, applying an electrical current to tissue of the subject; and

configuring the current to have a pulse frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse width of between about
20 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of between about 1 second and about 2 minutes.

291. A method comprising:

25 inserting an ENT endoscope, having at least one working channel, into a body of a subject;

passing at least one electrode through the working channel;

positioning the electrode in a vicinity of tissue of
30 the subject; and

driving the electrode to apply a non-ablating electrical signal to the tissue.

292. The method according to claim 291, wherein driving the electrode comprises configuring the signal to have a pulse
5 frequency of between about 10 Hz and about 50 Hz, an amplitude of between about 0.2 V and about 10 V, a pulse width of between about 50 microseconds and about 5 milliseconds, and, in alternation, on periods of between about 1 second and about 2 minutes, and off periods of
10 between about 1 second and about 2 minutes.

293. The method according to claim 291, wherein the tissue is selected from the list consisting of: a sphenopalatine ganglion (SPG) of the subject, a greater palatine nerve of the subject, a lesser palatine nerve of the subject, a
15 sphenopalatine nerve of the subject, a communicating branch between a maxillary nerve and an SPG of the subject, an otic ganglion of the subject, an afferent fiber going into the otic ganglion of the subject, an efferent fiber going out of the otic ganglion of the subject, an infraorbital nerve of
20 the subject, a vidian nerve of the subject, a greater superficial petrosal nerve of the subject, and a lesser deep petrosal nerve of the subject, and wherein driving the electrode comprises driving the electrode to apply the signal to the selected tissue.

25 294. The method according to claim 291, wherein the ENT endoscope includes a side-viewing scope having a viewing angle of between about 30 and about 120 degrees relative to a longitudinal axis of the endoscope, and comprising viewing the vicinity of the tissue via the scope.

295. The method according to claim 294, wherein viewing the vicinity of the tissue comprises viewing the electrode via the scope.

296. A method for modifying a property of a brain of a subject, comprising applying to a branch of a cranial nerve V of the subject an electrical current configured to affect physiological activity of a sphenopalatine ganglion (SPG) of the subject at a level sufficient to induce an increase in permeability of a blood-brain barrier (BBB) of the subject.

10 297. The method according to claim 296, comprising administering a sedative to the subject in conjunction with applying the current.

298. The method according to claim 296, comprising administering an anesthetic to the subject in conjunction
15 with applying the current.

299. The method according to claim 296, wherein applying the current comprises:

placing one or more electrodes on a surface of a face of the subject; and

20 driving the electrodes to apply the current to the branch of the cranial nerve V.

300. The method according to claim 296, wherein applying the current comprises configuring the current to increase the permeability of the BBB to a magnitude sufficient to treat a
25 condition of the subject.

301. The method according to claim 296, comprising performing a diagnostic activity with respect to a condition of the subject, in conjunction with the increase in permeability of the BBB.

302. A method for modifying a property of a brain of a subject, comprising applying to a branch of cranial nerve V of the subject an electrical current configured to affect physiological activity of a sphenopalatine ganglion (SPG) of the subject at a level sufficient to induce an increase in cerebral blood flow (CBF) of the subject.

303. The method according to claim 302, comprising administering a sedative to the subject in conjunction with applying the current.

10 304. The method according to claim 302, comprising administering an anesthetic to the subject in conjunction with applying the current.

305. The method according to claim 302, wherein applying the current comprises:

15 placing one or more electrodes on a surface of a face of the subject; and

 driving the electrodes to apply the current to the branch of the cranial nerve V.

306. The method according to claim 302, wherein applying the current comprises configuring the current to increase the CBF to a magnitude sufficient to treat a condition of the subject.

307. A method for modifying a property of a brain of a subject, comprising generating a magnetic field in the vicinity of a branch of a cranial nerve V of the subject configured to affect physiological activity of a sphenopalatine ganglion (SPG) of the subject at a level sufficient to induce an increase in permeability of a blood-brain barrier (BBB) of the subject.

308. The method according to claim 307, comprising administering a sedative to the subject in conjunction with generating the magnetic field.

309. The method according to claim 307, comprising
5 administering an anesthetic to the subject in conjunction with generating the magnetic field.

310. The method according to claim 307, wherein generating the field comprises configuring the field to increase the permeability of the BBB to a magnitude sufficient to treat a
10 condition of the subject.

311. The method according to claim 307, comprising performing a diagnostic activity with respect to a condition of the subject, in conjunction with the increase in permeability of the BBB.

15 312. A method for modifying a property of a brain of a subject, comprising generating a magnetic field in the vicinity of a branch of a cranial nerve V of the subject configured to affect physiological activity of a sphenopalatine ganglion (SPG) of the subject at a level
20 sufficient to induce an increase in cerebral blood flow (CBF) of the subject.

313. The method according to claim 312, comprising administering a sedative to the subject in conjunction with generating the magnetic field.

25 314. The method according to claim 312, comprising administering an anesthetic to the subject in conjunction with generating the magnetic field.

315. The method according to claim 312, wherein generating the field comprises configuring the field to increase the

CBF to a magnitude sufficient to treat a condition of the subject.

316. A method for application to a subject, comprising:

selecting a site from the list consisting of: a
5 sphenopalatine ganglion (SPG) of the subject, a greater
palatine nerve of the subject, a lesser palatine nerve of
the subject, a sphenopalatine nerve of the subject, a
communicating branch between a maxillary nerve and an SPG of
the subject, an otic ganglion of the subject, an afferent
10 fiber going into the otic ganglion of the subject, an
efferent fiber going out of the otic ganglion of the
subject, an infraorbital nerve of the subject, a vidian
nerve of the subject, a greater superficial petrosal nerve
of the subject, and a lesser deep petrosal nerve of the
15 subject; and

positioning a distal region of an elongated stimulator
in a vicinity of the site;

generating a neuroexcitatory electrical current at the
distal region;

20 confirming accurate positioning of the distal region,
responsively to an observation of an expected physiological
response to the neuroexcitatory current; and

in response to confirming the positioning, applying,
from the distal region, a chemical substance to the vicinity
25 of the site.

317. The method according to claim 316, comprising removing
the distal region of the elongated stimulator from a body of
the subject less than 1 hour following a termination of the
applying of the chemical substance.

318. The method according to claim 316, wherein applying the chemical substance comprises applying a neuroexcitatory chemical substance.

319. The method according to claim 316, wherein applying the
5 chemical substance comprises applying a neuroinhibitory chemical substance.

320. The method according to claim 316, wherein confirming the positioning comprises observing a level of lacrimation of the subject.

10 321. The method according to claim 316, wherein confirming the positioning comprises observing a level of nasal discharge of the subject.

322. The method according to claim 316, wherein confirming the positioning comprises observing a level of dilation of
15 blood vessels in an eye of the subject.

323. A method for modifying a property of a brain of a subject, comprising applying an electrical current to a mucous membrane of a palate of an oral cavity of the subject, the current capable of inducing an increase in
20 permeability of a blood-brain barrier (BBB) of the subject.

324. The method according to claim 323, comprising administering a sedative to the subject in conjunction with applying the current.

325. The method according to claim 323, comprising
25 administering an anesthetic to the subject in conjunction with applying the current.

326. The method according to claim 323, wherein applying the current comprises configuring the current to have a magnitude sufficient to activate a sphenopalatine ganglion

(SPG) of the subject via nerve fibers in physical contact with the mucous membrane.

327. The method according to claim 323, wherein applying the current comprises configuring the current to increase the permeability of the BBB to a magnitude sufficient to treat a
5 condition of the subject.

328. The method according to claim 323, comprising performing a diagnostic activity with respect to a condition of the subject, in conjunction with the increase in
10 permeability of the BBB.

329. A method for modifying a property of a brain of a subject, comprising applying an electrical current to a mucous membrane of a palate of an oral cavity of the subject, the current capable of inducing an increase in
15 cerebral blood flow (CBF) of the subject.

330. The method according to claim 329, comprising administering a sedative to the subject in conjunction with applying the current.

331. The method according to claim 329, comprising
20 administering an anesthetic to the subject in conjunction with applying the current.

332. The method according to claim 329, wherein applying the current comprises configuring the current to have a magnitude sufficient to activate a sphenopalatine ganglion
25 (SPG) of the subject via nerve fibers in physical contact with the mucous membrane.

333. The method according to claim 329, wherein applying the current comprises configuring the current to increase the CBF to a magnitude sufficient to treat a condition of the
30 subject.